

The experiment has not been found very satisfactory.

RICHMOND BELOW THE AVERAGE.

The following statement published by the commission is instructive:

Report for the Year 1904 of Gas and Light Commissioners of the Commonwealth of Massachusetts.									
Municipality.	Net Loss in Operating.	Interest.	Depreciation.	Items.	Total.	Cost Per Lamp Per Year.			
Belmont	\$ 3,842.31	\$ 1,197.92	\$ 940.60		\$ 5,980.83	62 c. p.	\$20.50	1,200 c. p.	\$76.44
Braintree	2,772.75	4,250.45	3,782.46	\$245.55	11,052.20	25 c. p.	15.94	1,200 c. p.	74.60
Chicopee	9,880.54	5,446.05	5,487.27	60.75	20,854.60	25 c. p.	15.94	1,200 c. p.	93.12
Concord	498.28	3,853.48	3,824.42		7,075.18	25 c. p.	9.67	1,000 c. p.	41.74
Danvers	4,661.19	2,148.82	1,831.32	44.40	7,705.10	25 c. p.	15.94	1,200 c. p.	67.46
Hingham	4,221.70	1,283.98	1,831.32		6,225.64	25 c. p.	15.94	1,200 c. p.	67.46
Holyoke	3,240.20	14,051.31	20,417.01		37,708.52	25 c. p.	15.94	1,200 c. p.	93.12
Hudson	2,587.05	2,196.78	1,658.43		6,442.26	25 c. p.	22.82	1,200 c. p.	106.03
Hull	361.88	6,830.92	6,131.52	116.26	12,440.58	25 c. p.	15.94	1,200 c. p.	93.12
Ipswich	3,487.01	1,281.90	1,658.43		6,442.26	25 c. p.	15.94	1,200 c. p.	93.12
Mansfield	1,853.86	1,821.88	2,183.78		5,859.52	25 c. p.	15.94	1,200 c. p.	93.12
Marblehead	1,534.21	4,632.50	4,107.90		10,174.70	25 c. p.	15.94	1,200 c. p.	93.12
Middleborough	1,088.41	3,771.35	2,446.26	70.40	4,376.03	25 c. p.	15.94	1,200 c. p.	93.12
Miller's Falls	625.22	611.80	610.65	65.40	1,912.28	25 c. p.	15.94	1,200 c. p.	93.12
North Attleborough	1,244.61	3,269.72	3,084.02	41.69	7,689.04	25 c. p.	15.94	1,200 c. p.	93.12
Peabody	6,654.65	4,203.00	2,481.18		13,338.83	25 c. p.	15.94	1,200 c. p.	93.12
Reading	1,355.33	3,323.00	2,539.08	86.62	7,223.03	25 c. p.	15.94	1,200 c. p.	93.12
Taunton	9,509.70	12,020.68	12,759.75	12	34,299.15	25 c. p.	15.94	1,200 c. p.	93.12
Warefield	7,166.96	3,634.14	2,810.23		13,611.33	25 c. p.	15.94	1,200 c. p.	93.12
Westfield	10,680.24	5,024.44	4,434.24		20,138.92	25 c. p.	15.94	1,200 c. p.	93.12
Westfield	7,031.08	1,850.47	2,074.81		11,056.36	25 c. p.	15.94	1,200 c. p.	93.12

Note: Average per lamp, 21 municipal plants, \$79.46.
Cost in Richmond by contract, \$47.75.

This official statement shows that the average cost for 21 plants, for each light, under municipal ownership, is \$79.46 per annum. In only three cases is the annual cost per light less than in the city of Richmond, where the contract price is \$47.75, and in each of these three cases the lamps burn less hours than in Richmond.

What the reports under the Massachusetts law are more complete than those elsewhere, they do not include loss of taxes, which would be derived from a private plant, which would aggregate for the plants named from \$20,000 to \$30,000 per annum, thus increasing the cost over the price in Richmond.

Cost in Massachusetts.

The following statement, taken from the report, shows not only the cost of lights per annum, but also the cost per lamp per hour, by the municipal plants of Massachusetts in 1904:

COST PER LAMP PER HOUR BY THE MUNICIPAL PLANTS OF MASSACHUSETTS IN 1904.

Municipality.	No. of hours per night.	No. of nights per month.	Cost per lamp per year.	Cost per lamp per hour.
Belmont	6.6	20.3	\$ 75.44	24.22
Braintree	7.4	27.9	74.50	22.28
Chicopee	9.0	29.5	41.74	12.33
Concord	6.0	24.2	67.46	23.23
Danvers	10.8	30.5	97.15	26.54
Hingham	6.2	24.5	56.61	19.25
Hudson	5.6	27.0	106.08	32.73
Mansfield (4 months)	13.6	30.5	53.29	14.89
Marblehead	8.5	25.1	60.28	14.72
Middleborough	7.1	24.7	99.41	33.54
Miller's Falls	5.3	21.8	90.20	34.62
Peabody	10.3	30.5	81.73	25.23
Reading	9.3	30.6	81.73	25.23
Taunton	5.2	24.5	52.34	18.14
Warefield	8.3	29.5	132.37	37.60
Westfield	6.4	25.0	93.31	27.77
Average	7.56	26.75	\$79.46	

From this it will be seen that the cost per lamp per hour varies from 1.33 cents in the case of Mansfield to 6.58 cents in the case of Miller's Falls while in Richmond the cost of the service under the city's contract is only 1.36 cents.

COST OF INCANDESCENT LAMPS UNDER MUNICIPAL SERVICE IN MASSACHUSETTS, AND BY PRIVATE COMPANIES IN RICHMOND.

Town.	Price per kw. hr.	Discount per cent.	Cost of lamp renewals.	Cost of lamp renewals.
Belmont	20	20 per cent.	At cost.	20 to 35c.
Braintree	20	20 per cent.	At cost.	20 to 35c.
Chicopee	12	20 per cent.	At cost.	20 to 35c.
Concord	20	20 per cent.	At cost.	20 to 35c.
Danvers	20	20 per cent.	At cost.	20 to 35c.
Hingham	20	20 per cent.	At cost.	20 to 35c.
Hudson	20	20 per cent.	At cost.	20 to 35c.
Hull	20	20 per cent.	At cost.	20 to 35c.
Ipswich	20	20 per cent.	At cost.	20 to 35c.
Mansfield	20	20 per cent.	At cost.	20 to 35c.
Marblehead	15	20 per cent.	At cost.	20 to 35c.
Middleborough	15	20 per cent.	At cost.	20 to 35c.
North Attleborough	15	20 per cent.	At cost.	20 to 35c.
Peabody	15	20 per cent.	At cost.	20 to 35c.
Reading	15	20 per cent.	At cost.	20 to 35c.
Taunton	20	20 per cent.	At cost.	20 to 35c.
Warefield	20	20 per cent.	At cost.	20 to 35c.
Westfield	20	20 per cent.	At cost.	20 to 35c.
Richmond, Va.	125 to 10		Free.	

Cost of Current.

The average cost of current to private consumers in Richmond is less than five cents per kw. hour, while in the case of private consumers under municipal control in Massachusetts, where such plants are as well managed perhaps as they can be in any place in the Union, is in many instances double the maximum Richmond rate, and four times the average Richmond rate.

A recent investigation has disclosed the fact that if the towns and cities owning and operating municipal plants in Massachusetts were to receive their current from the Boston Edison Company at its existing contract rates, that it would result in a saving to these twenty-one towns of \$361,400 per annum; and if they were to receive their current at the rates of the Boston Edison Company under twenty-year contracts, it would result in an annual saving of \$185,000. To this amount of \$546,400, the Boston Edison Company rates must be added the loss of taxes upon private plants which the cities would collect, which would aggregate, according to conservative estimates, from \$20,000 to \$30,000 per annum.

When these facts before them in the official report, it is not surprising that where the proposition for the establishment of municipal plants has been brought up in Massachusetts towns and cities in the year 1904, it has been rejected.

I regret that this does not permit a more extended analysis of this report. It is perhaps the most complete and accurate public document upon the subject obtainable in this country, and is worthy of the most careful investigation by any municipality proposing to establish an electric light plant.

I cannot undertake to trespass further upon the time of the committees in the analysis of these reports from other cities and sections. I realize how trying upon the patience is the study of figures, but this question is of much interest, and a careful examination of the experience of other communities is essential to its intelligent decision. Like all other questions of this character, reports from different sources often conflict, and

only ask that in the consideration of this subject the committees will be careful in every instance to see that they embrace proper charges against the municipal enterprise; otherwise they are of no value.

In other communities show results equally advantageous to Richmond. The following statement shows the rates charged in Richmond, per lamp per annum, and the rates charged in a number of other cities of over 51,000 inhabitants in this country:

RATES PER K. W. HOUR TO CONSUMERS FROM PUBLIC SERVICE CORPORATIONS.

No. of Consumers.	Range of Rates.	Source of Power.
Duluth, Minn.	5-10c.	Coal @ \$2.20.
Conneville, Pa.	3-12c-10c.	Coal @ \$1.00.
Harrisburg, Pa.	2-4c-10c.	Coal @ \$7-42.50.
Chattanooga, Tenn.	4-17-12c.	Coal @ \$1.50.
Birmingham, Ala.	6-12c.	Coal.
Kansas City, Mo.	6-12c.	Coal.
Rochester, N. Y.	5-10c-11-12c.	Coal @ \$1.50-11.50.
Denver, Col.	6-12c.	Coal @ \$1.75.
Memphis, Tenn.	4-12c.	Coal @ \$2.00 o. b.
Lowell, Mass.	4-10c-11c.	Coal @ \$4.50-45.00.
Grand Rapids	2-10c-12c.	Water and coal @ \$2.50.
St. Louis, Mo.	3-12c.	Coal @ \$1.25.
Wilkesbarre, Pa.	4-12c-11-12c.	Coal @ \$2.00.
Pittsburgh, Pa.	5-10c-15c.	Coal @ \$2.00-32.25.
Patterson, N. J.	2-6c-18c.	Coal @ \$2.00.
New Bedford, Mass.	5-10c-14c.	Coal @ \$2.57.
Trenton, N. J.	5-10c-14c.	Coal @ \$3.00.
Milwaukee, Wis.	2-10c-14c.	Coal @ \$2.30.
Baltimore, Md.	3-10c-16c.	Water.
Dayton, Ohio	3-10c-16c.	Water @ \$1.25 p. 3 c. Coal, \$3.
St. Paul, Minn.	1-10c-11c.	Coal @ \$1.00.
Peoria, Ill.	3-10c-20c.	Coal @ \$1.25-32.00.
Louisville, Ky.	3-10c-20c.	Coal @ \$1.10-12.00.
Indianapolis, Ind.	3-10c-20c.	Refuse wood from saw mill.
Albuquerque, N. Mexico	7-10c.	Coal @ \$2.00-water.

Richmond, Va. 1,650
Average Richmond rate. 1.650

Turning from the rates for lights to the rates per kilowatt hour for current or light furnished to private consumers, the comparison is no less favorable to this city. I have already shown that the cost per kilowatt hour for light and current furnished by municipal plants in Great Britain is considerably in excess of the cost per kilowatt hour in Richmond. The rates for light and current furnished by municipal plants in Massachusetts which show that these rates range from 10 to 20 cents per kilowatt hour, while the rate to private consumers in Richmond is only 1.36 cents per kilowatt hour, or 25 to 30 per cent. below the average for the entire community being about 4.8 cents. These figures speak for themselves.

When we compare the rates charged in Richmond with the rates charged by private companies in other similar communities the results are equally advantageous to the city. The following statement shows a comparison of the rates in Richmond with the rates charged in other cities of over 51,000 inhabitants, with the number of customers in each case, and the source of power.

RATES PER K. W. HOUR TO CONSUMERS FROM PUBLIC SERVICE CORPORATIONS.

No. of Consumers.	Range of Rates.	Source of Power.
Duluth, Minn.	5-10c.	Coal @ \$2.20.
Conneville, Pa.	3-12c-10c.	Coal @ \$1.00.
Harrisburg, Pa.	2-4c-10c.	Coal @ \$7-42.50.
Chattanooga, Tenn.	4-17-12c.	Coal @ \$1.50.
Birmingham, Ala.	6-12c.	Coal.
Kansas City, Mo.	6-12c.	Coal.
Rochester, N. Y.	5-10c-11-12c.	Coal @ \$1.50-11.50.
Denver, Col.	6-12c.	Coal @ \$1.75.
Memphis, Tenn.	4-12c.	Coal @ \$2.00 o. b.
Lowell, Mass.	4-10c-11c.	Coal @ \$4.50-45.00.
Grand Rapids	2-10c-12c.	Water and coal @ \$2.50.
St. Louis, Mo.	3-12c.	Coal @ \$1.25.
Wilkesbarre, Pa.	4-12c-11-12c.	Coal @ \$2.00.
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Since Mr. Trafford did not give the figures upon which his estimate of horse power was based, or the details of his estimated cost, analysis is difficult; but Mr. Whitner furnished me the following statement which speaks for itself.

We have already seen that the per capita cost of current in Great Britain is 90 to 100 cents per kw. hour, while the cost in New York, which according to the statement above given many times exceeds the cost of current in Richmond. These figures speak for themselves, and it would seem that no comment is necessary. They demonstrate that the present cost of electric current to the city of Richmond and to private consumers in this community is far less than the cost of a similar service to the people of communities served by municipal plants, or by private plants in other sections. In other words that the city of Richmond and its people pay less to-day for their electric service than in any other city of its size in the United States, whether the service be furnished by municipal plants or private plants, and much less than the cost of a similar service furnished by the municipal plants of Great Britain. It is submitted that these conditions do not demand the municipal action proposed and do not justify a large increase of the city's already heavy debt, to make the experiment of municipal ownership and operation.

Conditions in Richmond.

It is submitted that the conditions existing in the city of Richmond with respect to the price of electric light and current are not such as to demand the establishment of a plant by the municipal government, to protect either the city or its people from exorbitant charges.

I have already shown, by a comparison of the cost per are light, of municipal plants, both in England and in this country, that the present price paid by the city of Richmond for its street lighting is less per are light than the cost to municipalities owning their own plants. Taking the Massachusetts plants, for instance, the cost per are light per annum, in each of the twenty-one towns and cities operating municipal plants, exceeds the cost per are light per annum in Richmond, with the exception of three plants in Massachusetts, where the lights are burnt a less number of hours. The same tables, taken from the official reports, show that the average cost per are light furnished by municipal plants in Massachusetts, is \$79.46, as against the present price of \$47.75 in the city of Richmond. The reports of other municipal plants which have been reviewed, show according to their own figures a cost in every instance in excess of the present Richmond price. These comparisons are made upon the basis of a careful examination with municipal plants, and are not of the rates charged by private companies

Mr. Trafford's Report.

I desire now to notice briefly the report of Mr. E. W. Trafford, a printed copy of which I have in my possession, in which he recommends the establishment of a municipal plant at Richmond. In his references to the statements in this report, I need hardly suggest that no criticism is intended of Mr. Trafford personally, but I discuss the report only as one of the facts in the situation which I must consider.

In the outset, Mr. Trafford assumes that all private electric plants are overcapitalized. The answer to this suggestion is that comparison can be made with existing municipal plants which are free from such embarrassments. These comparisons have been made, and the figures are given above. The assumption of certain conditions on pages two and three of the report, and the resulting figures, can be of no value. It is easy to assume a condition which any conclusion can be drawn.

On page 3 is the statement, "Public necessities should be removed as far as possible from the realm of speculation." No facts are shown to indicate that electricity is a public necessity. The statement is used by only a very small minority of the community, or rather it is supplied by municipal or private plants and is one of the most recent of modern luxuries. If all necessities must be under municipal control, then the city must go into the coal business, for coal is a necessity; in the bread business, for bread is a necessity; in the clothing business, for clothing is a necessity, and in many other lines of business.

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